National Weather Service - Des Moines, IA
2011 Spotter Training
Course Notes and Registration Information

PREPARATION BEFORE SPOTTING

- A pro-active approach to spotting *before* storms enter a county is vital to the warning process.
- Stay informed before warnings are issued for your county utilizing radar data and National Weather Service (NWS) Products.
- Don't wait for a heads up call from the NWS. Time will not always permit this ahead of time.

Sources of Information

- National Weather Service Des Moines
  weather.gov/desmoines or mobile.weather.gov
- Storm Prediction Center
  spc.noaa.gov
- Iowa State University - Iowa Environmental Mesonet
  mesonet.agron.iastate.edu
- Mid-Iowa Skywarn Association
  www.midiowaskywarn.com
- National Association for Amateur Radio (ARRL)
  www.emergencyradio.org
- NOAA All-Hazards Weather Radio

How to report

- 1-800-SKYWARN (759-9276)
  Program into your phone today!
- On-line (eSpotter— espotter.weather.gov) and Twitter (www.weather.gov/stormreports)
- Amateur Radio at KØDMX
- Give location as precisely as possible
- Give start and end time of event. Be sure to differentiate between event time and report time.
- Provide frequent updates and don't assume NWS is aware of event, even if warning is in effect

What to Report

- **Strong Winds or damage**. Winds 50 mph or greater. Any tree or structure damage, either presently occurring or in the past.

  < 58 mph - Whole trees in motion; twigs and small limbs break off trees

  58-72 mph - Severe Thunderstorm criteria begins. Shingles torn off or minor structural damage; breaks off large limbs; pushes over shallow rooted trees

  73-112 mph - Substantial roof and structural damage; windows broken; trailer houses overturned; large trees uprooted

  113+ mph - Roofs torn off houses; weak buildings and trailer houses destroyed

- **Large Hail**. Severe Thunderstorm criteria >=1 inch diameter. Report hail of *any* size. Always report in terms of coins, or actual measurements. Avoid reporting as "marbles" which could be many sizes.
- **Wall Clouds and Funnel Clouds**. Rotation, movement and consistency of inflow are important
- **Tornadoes**
- **Flash Flooding**. Water standing on, or flowing over road. Roads washed out. People or vehicles swept away by flowing water. Rivers or streams out of their banks. Heavy rains in excess of an inch per hour.
- Snowfall or ice accumulations and hazardous road condition reports are also appreciated.

REMEMBER, SAFETY FIRST! TRY TO SPOT IN PAIRS AND STAY IN YOUR VEHICLE, THE SAFEST PLACE FROM HAIL AND LIGHTNING. DO NOT DRIVE INTO WATER OF ANY DEPTH, AND HAVE A PLANNED ESCAPE ROUTE.

To update your spotter information (address, phone number, e-mail), remove your e-mail from our mailing list, or send us pictures of hail, wind damage or interesting cloud features, please contact us via e-mail at dmx.spotter@noaa.gov. For real-time reporting of severe weather events call 1-800-SKYWARN (759-9276), send electronically via eSpotter (espotter.weather.gov), or contact amateur radio SKYWARN net control at callsign KØDMX.

Wall Clouds

- Suggest inflow/updraft
- Attached to rain-free cloud base
- Maintain position with respect to rain
- May contain tail cloud that slopes upward from precipitation into storm

Shelf Clouds

- Suggest downdraft/outflow
- Leading edge of gust front, moving away from rain
- Slope downward away from precipitation area
- Often with squall line

OPTIMUM SPOTTER VIEWING ANGLE

- Wall clouds and tornadoes are typically on the right or front side of storm with respect to their movement. This makes knowledge of storm motion important!
- Safest and best viewing angle is with the storm moving to your right as you look at it (Right Hand Rule).
- Viewing on the left or rear flank of the storm, or with the storm moving to your left, often results in poor viewing with line of sight obscured by rain and/or hail.

Tornado: *"*A violently rotating column of air attached to a nearby shower or thunderstorm, *and* in contact with the ground. Visible cloud or appearance of funnel not needed."

FUNNEL CLOUDS VS. TAIL CLOUDS

- Funnel clouds rotate, usually rapidly, extending downward from cloud base.
- As opposed to scud clouds, funnel clouds typically have laminar or smooth appearance
- Funnel clouds are located near updraft, usually vertical, and several orders of magnitude smaller than parent wall cloud.
- Tail clouds are often horizontal and funnel-like, but do not rotate. They should not be confused with actual funnel clouds for these reasons.

Who can make spotter training better each year? You, that's who! Local pictures and video of wall clouds, funnel clouds, large hail and other features provide examples that Iowa spotters are more likely to see. New pictures and video also make the talk more interesting. Send your pictures and/or video to the e-mail or mailing addresses listed below. Your contribution could end up in our spotter newsletter or next year's presentation.

Spotter Registration Information

The preferred method to register as a spotter is via e-mail. The previous method of collecting sign up sheets at talks became unmanageable as our spotter program has grown, with as many as 10 presenters collecting over 500 new registrants each season.

To register as a new spotter please submit the following to this e-mail address: **dmx.spotter@noaa.gov.**
You do not need to re-register if you have done so in the past unless your address or phone number has changed.

- Name
- Mailing address
- Residence address (if different)*
- Phone numbers available to spot (home, work, cell)

* *Residence address is needed to plot your location so we can cross-reference your information to what we are seeing on radar.*

If you do not have e-mail available, please send a short note or post card with the above information to:

SVN Spotter Program
NOAA / National Weather Service
9607 NW Beaver Dr.
Johnston, IA 50131

Once your information has been received, your application will be confirmed and spotter number assigned via return e-mail or postal mailing. Please allow up to 2 weeks for a reply.